WE CLAIM:

1. A structure comprising:

an electron-emitting device;

a light-emitting device coupled to the electron-emitting device to form a hermetically sealed enclosure through which electrons emitted by the electron-emitting device pass to strike the light-emitting device and cause it to emit light that produces an image; and

inert gas located in open space of the sealed enclosure, the inert gas consisting of at least one of (a) helium at a partial pressure of at least $2x10^{-5}$ torr, (b) argon at a partial pressure of at least $3x10^{-5}$ torr, and (c) at least one of neon, krypton, xenon, and radon at a partial pressure of at least $5x10^{-7}$ torr.

2. A structure as in Claim 1 wherein the structure is a flat-panel display.

3. A structure as in Claim 1 wherein the electron-emitting device comprises:

a backplate; and

an array of laterally separated electron-emissive regions situated over the backplate, each electron-emissive region comprising at least one electron-emissive element.

4. A structure as in Claim 3 wherein the electron-emissive regions emit electrons according to field emission.

5. A structure as in Claim 1 wherein the inert gas comprises at least one of (a) neon at a partial pressure of at least $1x10^{-5}$ torr and (b) krypton at a partial pressure of at least $1x10^{-6}$ torr.

6. A structure as in Claim 1 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $5x10^{-5}$ torr, (b) neon at a partial pressure of at least $2x10^{-5}$ torr, (c) argon at a partial pressure of at least $4x10^{-5}$ torr, (d) krypton at a partial pressure of at least $2x10^{-6}$ torr, and (e) at least one of xenon and radon at a partial pressure of at least $1x10^{-6}$ torr.

7. A structure as in Claim 1 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $1x10^{-4}$ torr, (b) at least one of neon and argon at a partial pressure of at least $5x10^{-5}$ torr, (c) krypton at a partial pressure of at least $5x10^{-6}$ torr, and (d) at least one of xenon and radon at a partial pressure of at least $2x10^{-6}$ torr.

8. A structure as in Claim 1 further including a getter for collecting non-inert contaminant material present in the sealed enclosure.

9. A structure as in Claim 8 wherein the electron-emitting device has an active electron-emitting portion across which electrons are emitted from the electron-emitting device, the getter being distributed across the active electron-emitting portion.

10. A structure as in Claim 1 further including a reservoir for supplying inert gas to the open space of the sealed enclosure.

11. A structure as in Claim 1 wherein the inert gas is at a partial pressure of no more than $1x10^{-1}$ torr.

12. A structure as in Claim 1 wherein the inert gas comprises at least one of (a) helium at a partial pressure of no more than $1x10^{-1}$ torr, (b) neon at a partial pressure of no more than $5x10^{-2}$ torr, (c) argon at a partial pressure of no more than $1x10^{-2}$ torr, (d) krypton at a partial pressure of no more than $5x10^{-3}$ torr, and (e) xenon or radon at a partial pressure of no more than $1x10^{-3}$ torr.

13. A structure comprising:

an electron-emitting device;

a light-emitting device coupled to the electron-emitting device to form a hermetically sealed enclosure through which electrons emitted by the electron-emitting device pass to strike the light-emitting device and cause it to emit light that produces an image;

inert gas located in open space of the sealed enclosure at a partial pressure of at least $5x10^{-7}$ torr; and

a reservoir for supplying inert gas to the open space of the sealed enclosure.

14. A structure as in Claim 13 wherein the structure is a flat-panel display.

15. A structure as in Claim 13 wherein the electron-emitting device comprises:

a backplate; and

an array of laterally separated electron-emissive regions situated over the backplate, each electron-emissive region comprising at least one electron-emissive element.

16. A structure as in Claim 13 wherein the electron-emissive regions emit electrons according to field emission.

17. A structure as in Claim 13 wherein the reservoir comprises a container that encloses inert gas, the container having a wall through which inert gas passes from the container to the sealed enclosure.

18. A structure as in Claim 17 wherein the wall is gas permeable.

19. A structure as in Claim 17 wherein at least part of the inert gas in the container is in gaseous form.

20. A structure as in Claim 17 wherein at least part of the inert gas in the container is in inert-gas compound form.

21. A structure as in Claim 17 wherein at least part of the inert gas in the container is present in inert-gas absorbent-material form.

22. A structure as in Claim 13 wherein the reservoir comprises at least one piece of inert-gas compound material.

23. A structure as in Claim 13 wherein the reservoir comprises at least one piece of absorbent material charged with inert gas.

24. A structure as in Claim 13 wherein the reservoir comprises of at least one piece of material impregnated with inert gas.

25. A structure as in Claim 13 further including a getter for collecting non-inert contaminant material present in the sealed enclosure.

26. A structure as in Claim 25 wherein the electron-emitting device has an active electron-emitting portion across which electrons are emitted from the electron-emitting device, the getter being distributed across the active electron-emitting portion.

27. A structure as in Claim 13 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $2x10^{-5}$ torr, (b) at least one of neon and argon at a partial pressure of at least $1x10^{-5}$ torr, (c) krypton at a partial pressure of at least $1x10^{-6}$ torr, and (d) at least one of xenon and radon at a partial pressure of at least $5x10^{-7}$ torr.

28. A structure as in Claim 13 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $5x10^{-5}$ torr, (b) at least one of neon and argon at a partial pressure of at least $2x10^{-5}$ torr, (c) krypton at a partial pressure of at least $2x10^{-6}$ torr, and (d) at least one of xenon and radon at a partial pressure of at least $1x10^{-6}$ torr.

29. A structure as in Claim 13 wherein the inert gas is at a partial pressure of no more than $1x10^{-1}$ torr.

30. A structure as in Claim 13 wherein the inert gas comprises at least one of (a) helium at a partial pressure of no more than $1x10^{-1}$ torr, (b) neon at a partial pressure of no more than $5x10^{-2}$ torr, (c) argon at a partial pressure of no more than $1x10^{-2}$ torr, (d) krypton at a partial pressure of no more than $5x10^{-3}$ torr, and (e) xenon or radon at a partial pressure of no more than $1x10^{-3}$ torr.

31. A method of cleaning a structure comprising an electron-emitting device and a light-emitting device coupled to the electron-emitting device to form a hermetically sealed enclosure through which electrons emitted by the electron-emitting device pass to strike the light-emitting device and cause it to emit light that produces an image, open space of the sealed enclosure containing inert gas consisting of at least one of (a) helium at a partial pressure of at least $2x10^{-5}$ torr, (b) argon at a partial pressure of at least $3x10^{-5}$ torr, and (c) at least one of neon, krypton, xenon, and radon at a partial pressure of at least $5x10^{-7}$ torr, the method comprising operating the electron-emitting device so that part of the electrons emitted by the electron-emitting device collide with atoms of the inert gas to produce inert-gas ions which bombard contaminant material situated over the electron-emitting device in the sealed enclosure and cause at least part of the contaminant material to be dislodged from the electron-emitting device.

32. A method as in Claim 31 wherein the structure is a flat-panel display.

33. A method as in Claim 31 wherein the electron-emitting device comprises a backplate and an array of laterally separated electron-emissive regions situated over the backplate, each electron-emissive region comprising at least one electron-emissive element, the contaminant material attacked by the inert-gas ions comprising contaminant material situated over the electron-emissive elements.

34. A method as in Claim 31 wherein the inert gas comprises at least one of (a) neon at a partial pressure of at least $1x10^{-5}$ torr and (b) krypton at a partial pressure of at least $1x10^{-6}$ torr.

35. A method as in Claim 31 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $5x10^{-5}$ torr, (b) neon at a partial pressure of at least $2x10^{-5}$ torr, (c) argon at a partial pressure of at least $4x10^{-5}$ torr, (d) krypton at a partial pressure of at

least $2x10^{-6}$ torr, and (e) at least one of xenon and radon at a partial pressure of at least $1x10^{-6}$ torr.

36. A method as in Claim 31 further including collecting non-inert material, including particles of the dislodged contaminant material, present in the sealed enclosure.

37. A method as in Claim 31 further including supplying the open space of the sealed enclosure with inert gas.

38. A method as in Claim 37 further including collecting non-inert material, including particles of the dislodged contaminant material, present in the sealed enclosure.

39. A method of cleaning a structure comprising an electron-emitting device and a light-emitting device coupled to the electron-emitting device to form a hermetically sealed enclosure through which electrons emitted by the electron-emitting device pass to strike the light-emitting device and cause it to emit light that produces an image, open space of the sealed enclosure containing inert gas at a partial pressure of at least $5x10^{-7}$ torr, the method comprising;

operating the electron-emitting device so that part of the electrons emitted by the electron-emitting device collide with atoms of the inert gas to produce inert-gas ions which bombard contaminant material situated over the electron-emitting device in the sealed enclosure and cause at least part of the contaminant material to be dislodged from the electron-emitting device; and

supplying the open space of the sealed enclosure with inert gas.

40. A method as in Claim 39 wherein the structure is a flat-panel display.

41. A method as in Claim 39 wherein the electron-emitting device comprises a backplate and an array of laterally separated electron-emissive regions situated over the backplate, each electron-emissive region comprising at least one electron-emissive element, the contaminant material bombarded by the inert-gas ions comprising contaminant material situated over the electron-emissive elements.

42. A method as in Claim 39 further including collecting non-inert material, including particles of the dislodged contaminant material, present in the sealed enclosure.

43. A method as in Claim 39 wherein the inert gas supplied to the open space of the sealed enclosure compensates at least partially for inert-gas ions that lodge in the electron-emitting device.

44. A method as in Claim 43 further including collecting non-inert material, including particles of the dislodged contaminant material, present in the sealed enclosure.

45. A method as in Claim 39 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $2x10^{-5}$ torr, (b) at least one of neon and argon at a partial pressure of at least $1x10^{-5}$ torr, (c) krypton at a partial pressure of at least $1x10^{-6}$ torr, and (d) at least one of xenon and radon at a partial pressure of at least $5x10^{-7}$ torr.

46. A method as in Claim 39 wherein the inert gas comprises at least one of (a) helium at a partial pressure of at least $5x10^{-5}$ torr, (b) at least one of neon and argon at a partial pressure of at least $2x10^{-5}$ torr, (c) krypton at a partial pressure of at least $2x10^{-6}$ torr, and (d) at least one of xenon and radon at a partial pressure of at least $1x10^{-6}$ torr.